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IN THE UNITED STATES PATENT & TRADEMARK OFFICE

IN RE APPLICATION OF :  
MARTIN KREYENSCHMIDT, ET AL. : EXAMINER: COONEY, JOHN M.  
SERIAL NO: 10/512,081 :  
FILED: NOVEMBER 8, 2004 : GROUP ART UNIT: 1796  
FOR: METHOD FOR PRODUCING :  
POLYURETHANE FOAMED  
MATERIALS HAVING AN IMPROVED  
LONG-TERM STABILITY

PRE-APPEAL BRIEF REQUEST FOR REVIEW

COMMISSIONER FOR PATENTS  
ALEXANDRIA, VIRGINIA 22313

SIR:

Responsive to the Advisory Action of November 19, 2008, the Office Action of July 30, 2008, and further to the Request for Reconsideration filed on October 30, 2008 and a discussion with the Examiner of December 3, 2008, Applicants request pre-Appeal Brief Review of the rejections in this case in view of the Notice of Appeal submitted concurrently herewith.

**Remarks** begin on page 2 of this paper.

### REMARKS

Applicants submit that the rejections of the present claims as obvious over the combination of either Dany (US 3,847,843) or Arlt (WO 0066643) with Kreyenschmidt (DE 10050417) contain clear legal and/or factual errors meriting withdrawal of the rejections and allowance of the claims.

The clear legal and factual errors include: (i) the Office errs by failing to give full consideration to the “teaching away” in the cited art, (ii) the Office errs by failing to consider Applicants’ factual evidence rebutting the Office’s assertion of obviousness, and (iii) the Office’s assertion that Applicants’ factual evidence is insufficient to show an unexpected result is factually incorrect.

Present Claim 1 recites a process that includes reacting a polyisocyanate and a compound having at least two hydrogen atoms (e.g., a polyol) in the presence of a wax-encapsulated inhibitor to form a polyurethane.

The Dany reference discloses a process in which an isocyanate is reacted with a polyol in the presence of a stabilizer to form a polyurethane foam (see page 3 of the July 30, 2008 Office Action). The Office acknowledges that Dany does not disclose a wax-encapsulated inhibitor (see page 3 of the July 30 Office Action) but otherwise asserts that the Dany stabilizer encompasses Applicants’ inhibitor.

The Office relies on Kreyenschmidt as evidence that it would be obvious to encapsulate the stabilizer present in the Dany process “for the purpose of inhibiting the active agent’s effect” and thereby arrive at the presently claimed invention (see page 3 of the July 30 Office Action).

The Office’s combination of Dany and Kreyenschmidt is improper because Dany contradicts the Office’s basis for combining the references. Dany’s contradictory disclosure includes, for example:

The stabilizers of the present invention were used in the production of polyurethane foam plastics. They could not be found to affect the foaming process, in a manner determinable by testing. The expansion time and the non-tack range, which critically determine the commercial production of foam plastics, could not be found to have been changed. Nor could the stabilizer addends of the present invention be found to effect in a manner determinable by testing the physical properties of final foam plastics, such as compressive or tear strength, elasticity, dimensional stability, unit weight or the open cellular structure of soft foam plastics...

See column 3, lines 62-74 of Dany (emphasis added).

Dany explicitly discloses that the inclusion of a stabilizer in an isocyanate/polyol reaction does not affect the reaction or the properties of the resultant polyurethane foam. Dany therefore teaches that there is no reason to encapsulate a stabilizer with a wax because the stabilizer has no affect on the isocyanate/polyol reaction or the resultant polyurethane foam. The Office's assertion that one of ordinary skill in the art would be motivated to encapsulate the stabilizer of Dany in accordance with the disclosure of Kreyenschmidt to affect the characteristics of the reaction or the resultant foam is contradictory to Dany's disclosure that stabilizers do not affect the isocyanate/polyol reaction or the resultant polyurethane foam.

The combination of Dany and Kreyenschmidt is thus not supportable in view of Dany's explicit "teaching away" from such a combination. The rejection should therefore be withdrawn.

Applicants put forth the above arguments in the Amendment of October 30, 2008 (see page 2, line – page 5, line 13). It appears that the Office failed to give Applicants' remarks due consideration.

The Office's rejection of the claims is further legally improper in view of Applicants' evidence rebutting the Office's assertion of obviousness. Table 1 of the present specification describes inventive and comparative examples showing that a process that includes reacting a

polyisocyanate and a polyol in the presence of a wax-encapsulated inhibitor is substantially different in comparison to a process in which a polyisocyanate and a polyol are reacted in the presence of an inhibitor that is not encapsulated in wax (see page 16 of the specification and page 3, line 8 to page 4, line 5 of the October 30 Amendment). The data further show that the polyurethane foam obtained from the claimed process is substantially superior in comparison to a polyurethane foam obtained by a process in which an inhibitor is not encapsulated (see Applicants' arguments on page 3, line 8 to page 4, line 5 of the Amendment filed on October 30, 2008).

Applicants' factual evidence shows that encapsulating an inhibitor changes the rise time and cream time of the isocyanate/polyol reaction and the physical properties of the resultant polyurethane foam. Such changes are not foreseeable in view of Dany's disclosure that a stabilizer has no effect on the isocyanate/polyol reaction or the resultant polyurethane foam.

The evidence of the original specification is thus probative of the non-obviousness of the claims. The Office's failure to give such evidence full consideration is legal error. The rejection should therefore be withdrawn.

The Office asserted that the improvement shown by Applicants "has not been shown to be more significant than that which would be expected" (see the continuation sheet of the December 8, 2008 Advisory Action). Applicants submit this is clear factual error because, as noted above, Dany discloses that no change in foaming or the resultant foam occurs when the foaming reaction (e.g., isocyanate/polyol reaction) is carried out in the presence of a stabilizer (i.e., a compound which the Office asserts encompasses the inhibitor of the present claims). Applicants' factual evidence must be unexpected in view of Dany's disclosure that stabilizers have no effect on isocyanate/polyol reactions or the polyurethane foams obtained therefrom.

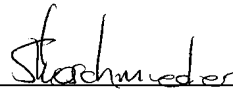
The Office factually errs by asserting that Applicants' evidence does not show an unexpected result. The rejection is thus further not supportable and should be withdrawn.

The discussion above is equally relevant to the Office's legally unsupportable rejection of the claims over Arlt and Kreyenschmidt. The evidence of record, e.g., Dany, shows that those of ordinary skill in the art would have expected that the inclusion of stabilizer in an isocyanate/polyol reaction would not change the process or the foams derived therefrom. Applicants have shown, unexpectedly, that this is not correct.

For the reasons discussed above Applicants submit that withdrawal of the rejections and the allowance of all-now pending claims is proper.

Respectfully submitted,

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